

Title (en)
Light emitting diode

Title (de)
Leuchtdiode

Title (fr)
Diode électroluminescente

Publication
EP 2355183 B1 20190306 (EN)

Application
EP 11151631 A 20110121

Priority
KR 20100009210 A 20100201

Abstract (en)
[origin: EP2355183A2] Provided are a light emitting diode, (100,102,103) a light emitting diode package (200), and a lighting system (1100,1200). The light emitting diode includes a light emitting structure (120) including a first conductive type semiconductor layer (122), a second conductive type semiconductor layer (126), and an active layer (124) between the first conductive type semiconductor layer and the second conductive type semiconductor layer and a light extraction pattern (P) in which a period (a) exceeds λ/n (where, λ , is a wavelength of light emitted from the active layer, and n is a refractive index of the light emitting structure) on the light emitting structure. The period (a) may be in the range of $5 \times (\lambda/n) < a < 15 \times (\lambda/n)$. An etching depth (h) of the light extraction pattern (P) may be equal to or greater than λ/n .

IPC 8 full level
H01L 33/38 (2010.01); **H01L 33/22** (2010.01); **H01L 33/20** (2010.01); **H01L 33/46** (2010.01); **H01L 33/50** (2010.01)

CPC (source: EP US)
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H01L 33/46 (2013.01 - EP US); **H01L 33/50** (2013.01 - EP US); **H01L 2224/48091** (2013.01 - EP US); **H01L 2924/12032** (2013.01 - EP US);
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Designated contracting state (EPC)
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DOCDB simple family (publication)
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